

REMARKS

In the Office Action dated August 13, 2003, the Examiner rejected claims 1, 10-11, and 17 under 35 U.S.C. § 103(a) as being unpatentable over Chorn (U.S. Patent No. 6,275,843) in view of Abe et al. (U.S. Patent No. 6,052,695), in further view of Simor (U.S. Patent No. 5,060,150), and in further view of Edstrom et al. (U.S. Patent No. 5,060,150) (Office Action [hereinafter "OA"], paragraph 4); rejected claims 2-7 and 18 under 35 U.S.C. §103(a) as being unpatentable over Chorn in view of Abe et al., in further view of Simor, and in further view of Hoffpauir (U.S. Stat. Inv. Reg. No. H1,896) (hereinafter "Hoffpauir 1") (OA, paragraph 5); rejected claims 8-9, 12-15, and 19-21 under 35 U.S.C. § 103(a) as being unpatentable over Chorn in view of Abe et al., in further view of Simor, and in further view of Hoffpauir (U.S. Stat. Inv. Reg. No. H1,918) (hereinafter "Hoffpauir 2") (OA, paragraph 6); and rejected claim 16 under 35 U.S.C. § 103(a) as being unpatentable over Chorn in view of Abe et al., in further view of Simor, and in further view of Hoffpauir 2, and in further view of Jones et al. (U.S. Patent No. 5,193,110) (OA, paragraph 7). Additionally, the Examiner objected to the drawings under 37 C.F.R. § 1.83(a), as not showing every feature of the invention specified in the claims (OA, paragraph 3).

In view of the remarks that follow, Applicant respectfully traverses the Examiner's objection to the drawings under 37 C.F.R. § 1.83(a), and rejections of the claims under 35 U.S.C. § 103.

Regarding the Examiner's objection to the drawings, Applicant respectfully submits that the drawings as previously submitted show every feature of the invention specified in the claims. More particularly, the Examiner asserted that:

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"to provide an indication to the first process of an expected time before the resource will become available determined based on a call duration value associated with the second process", "resource manager", "first process", and "second process" must be shown or the feature(s) canceled from the claim(s).

Applicant submits that each of the features mentioned by the Examiner is presently in the drawings. For example, step 204 of Figs. 11 and 12 is labeled "Return Hint." The description corresponding to step 204 explains that this hint is an indication that may be provided to an application requesting use of a resource (page 15, lines 9-15). The indication may refer to an estimated call duration value (page 15, line 12 - page 16, line 10). Additionally, the description, at page 18, line 11, mentions that dispatcher 124, which is shown in at least Figs. 4, 5, 7, and 13 is an example of a resource manager. Moreover, the description mentions various applications and threads that may own a resource (pages 15-18). These applications and threads correspond to the claimed processes and can be found in at least Figs. 4, 5, 7, and 13.

As demonstrated above, each of the features alleged to be missing from the drawings are in fact present. Accordingly, Applicant respectfully submits that the Examiner's objection is overcome, and it is not necessary to amend the drawings. Applicant requests that the Examiner remove the objection to the drawings.

The Examiner rejected claims 1, 10-11, and 17 under 35 U.S.C. § 103(a) as being unpatentable over Chorn in view of Abe et al., in further view of Simor, and in further view of Edstrom et al. This rejection is respectfully traversed because a prima facie case of obviousness has not been made by the Examiner. To establish a prima facie case of obviousness, three basic criteria must be met. First, the prior art reference as modified must teach or suggest all the claim elements. Second, there must be some

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suggestion or motivation, either in the reference or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine the reference teachings. Third, a reasonable expectation of success must exist. Moreover, each of these requirements must "be found in the prior art, and not be based on applicant's disclosure." (M.P.E.P. § 2143.03 (8th ed. 2001)).

Claim 1 provides for a resource manager operable to control allocation of a resource to competing computing processes including at least a first process and a second process, the resource manager being responsive to identification of a thread for the first process requesting allocation of the resource, when the resource is already allocated to a thread for the second process, to establish a joining function to the thread for the second process and to provide an indication to the first process of an expected time before the resource will become available determined based on a call duration value associated with the second process, the joining function being operable to notify the resource manager on termination of the thread for the second process, and the resource manager being operable in response to termination of the thread for the second process to allocate the resource to the thread for the first process.

Applicant respectfully submits that Chorn in view of Abe et al., in further view of Simor, and in further view of Edstrom et al. do not disclose or suggest at least this claimed combination of elements. For example, the references do not disclose or suggest at least a resource manager being responsive to identification of a thread for the first process requesting allocation of the resource, when the resource is already allocated to a thread for the second process, to establish a joining function to the thread for the second process and to provide an indication to the first process of an expected time before

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the resource will become available determined based on a call duration value associated with the second process.

Chorn discloses a system in which multiple service requests of a global transaction are processed by a single server application program instance without the use of multiple intermediate communication server instances (abstract). A client application program provides access to one or more resources that are required by a transaction (col. 6, line 64 - col. 7, line 1). A resource manager provides access to a resource for the application program (col. 7, lines 8-9). A communication resource manager controls communication between the client application program and other application programs that are participating in transactions (col. 7, lines 22-25). Thread identifiers are used by the communication resource manager to manage its resources for processes using the services of the communication resource manager (col. 14, lines 38-40).

In contrast, systems and methods consistent with the present invention with the present invention as recited for example in claims 1, 10-12, and 17, include a resource manager that provides an indication to a first process of an expected time before a resource will become available determined based on a call duration value associated with the second process. The call duration value may be calculated in a number of ways, including using a heuristic method based on an application type of the second process. For example, the dispatcher knows the basic type of each telephony application by virtue of the application's priority number (page 14, lines 25-27). Based on the type of application currently in control of the resource, the dispatcher can guess typical values of a call duration (page 14, lines 28-29). The resource managers of Chorn do not

provide such an indication to a process determined based on a call duration value. Accordingly, Chorn does not disclose, teach, or suggest a resource manager being responsive to identification of a thread for the first process requesting allocation of the resource, when the resource is already allocated to a thread for the second process, to establish a joining function to the thread for the second process and to provide an indication to the first process of an expected time before the resource will become available determined based on a call duration value associated with the second process.

Abe et al. is not sufficient to overcome the aforementioned deficiencies of Chorn. Abe et al. discloses a system in which a first log processing thread outputs all log data including that for a second log processing thread and returns an output completion notification, when the second log processing thread goes into a waiting state for the output completion notification (col. 27, lines 35-45). When the notification is received, the second log processing thread terminates its own processing (col. 27, lines 45-47). Abe et al. is silent on a resource manager that provides an indication to a first process of an expected time before a resource will become available determined based on a call duration value associated with the second process. Accordingly, Abe et al., either alone or in combination with Chorn, does not disclose, teach, or suggest a resource manager being responsive to identification of a thread for the first process requesting allocation of the resource, when the resource is already allocated to a thread for the second process, to establish a joining function to the thread for the second process and to provide an indication to the first process of an expected time before the resource will become available determined based on a call duration value associated with the second process.

Simor is not sufficient to overcome the aforementioned deficiencies of Chorn and Abe et al. Simor discloses a system in which a process termination monitor may be requested at each resource allocation for a process (col. 17, lines 55-57). Resource managers are accordingly notified when the process terminates, and the resource release can be initiated by the resource manager itself (col. 17, lines 57-59). This configuration disclosed by Simor is different than the presently claimed invention. For example, Simor does not provide an indication to a first process of an expected time before a resource will become available determined based on a call duration value associated with a second process. Accordingly, Simor, either alone or in combination with Chorn and/or Abe et al., does not disclose, teach, or suggest a resource manager being responsive to identification of a thread for the first process requesting allocation of the resource, when the resource is already allocated to a thread for the second process, to establish a joining function to the thread for the second process and to provide an indication to the first process of an expected time before the resource will become available determined based on a call duration value associated with the second process.

Edstrom et al. is not sufficient to overcome the aforementioned deficiencies of Chorn, Abe et al., and Simor. Edstrom et al. discloses a system in which scheduling software provides data and time allocation of resources to a sequence of processes for manufacturing a desired item (abstract). Resources are dynamically allocated to satisfy processes according to pre-established rules for allocation (abstract). Based on the rules, a resource manager uniquely identifies a resource (col. 14, lines 25-27). From a record that corresponds to the uniquely identified resource, the resource manager looks up three time values and determines the length of time for which the resource would be

allocated to the process (col. 14, lines 30-36). Thereafter, using allocation blocks in memory, the resource manager determines whether the resource may be allocated for the determined length of time on the desired date/time being scheduled (col. 14, lines 36-40).

The aforementioned resource management of Edstrom et al. is different than the presently claimed invention. Methods and systems consistent with the present invention recited for example in claims 1, 10-11, and 17, provide an indication of an expected time before a resource will become available determined based on a call duration value. The resource management of Edstrom et al., however, determines the length of time that would be allocated to a process. The length of time that would be allocated to a process is different than an expected time before a resource will become available. The length of time that would be allocated to a process suggests that the process does not yet have control over the resource. On the other hand, an expected time before a resource will become available suggests that the process already has control over the resource and a determination is made to estimate how much longer the process will have control.

In other words, the resource management of Edstrom et al. is concerned with allocating resources before any processes have control over the resources, while resource management consistent with the present invention deals with resources that are already allocated to processes. Accordingly, Edstrom et al., either alone or in combination with Chorn, Abe et al., and/or Simor does not disclose, teach, or suggest a resource manager being responsive to identification of a thread for the first process requesting allocation of the resource, when the resource is already allocated to a thread

for the second process, to establish a joining function to the thread for the second process and to provide an indication to the first process of an expected time before the resource will become available determined based on a call duration value associated with the second process.

For at least the foregoing reasons, Applicant submits that the rejection of claims 1, 10-11, and 17 is unsupported by Chorn in view of Abe et al., in further view of Simor, and in further view of Edstrom et al. Applicant also submits that the teachings of Hoffpauir 1 and/or Hoffpauir 2 are insufficient to remedy the aforementioned deficiencies of Chorn, Abe et al., Simor, and Edstrom et al. Accordingly, the combination of Chorn, Abe et al., Simor, Edstrom et al., Hoffpauir 1, and Hoffpauir 2 does not teach or suggest claims 1, 10-11, and 17.

The Examiner rejected claims 8-9, 12-15, and 19-21 under 35 U.S.C. 103(a) as being unpatentable over Chorn in view of Abe et al., in further view of Simor, and in further view of Hoffpauir 2. Claim 12 provides for a telecommunications apparatus, comprising: at least one telephony resource for connection to a telecommunications network; and a resource manager for controlling allocation of the telephony resource to competing computing processes including at least a first process and a second process, the resource manager being responsive to identification of a thread for the first process requesting allocation of the resource, when the resource is already allocated to a thread for the second process, to establish a joining function to the thread for the second process and to provide an indication to the first process of an expected time before the resource will become available determined based on a call duration value associated with the second process, the joining function being operable to notify the resource

manager on termination of the thread for the second process, and the resource manager being operable in response to termination of the thread for the second process to allocate the resource to the thread for the first process.

Applicant respectfully submits that Chorn in view of Abe et al., in further view of Simor, and in further view of Hoffpauir 2 do not disclose or suggest at least this claimed combination of elements. For example, the references do not disclose or suggest at least a resource manager being responsive to identification of a thread for the first process requesting allocation of the resource, when the resource is already allocated to a thread for the second process, to establish a joining function to the thread for the second process and to provide an indication to the first process of an expected time before the resource will become available determined based on a call duration value associated with the second process.

As explained above with reference to claim 1, Chorn in view of Abe et al. and Simor do not teach a resource manager being operable to provide an indication to a first process of an expected time before a resource will become available determined based on a call duration value associated with a second process. Hoffpauir 2 is not sufficient to overcome the aforementioned deficiencies of Chorn, Abe et al., and Simor. Hoffpauir 2 disclose a system in which an integrated authentication center includes an application process, such as a call processing application, that includes a plurality of software objects such as a home location register and an authentication center (abstract). The system includes a resource manager application that manages and allocates the resources of a resource assembly with respect to a call processor and enables different

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applications of the call processor to interface with resources of the resource assembly (col. 13, lines 62-66).

Hoffpauir 2 fails to show providing an indication to a first process of an expected time before a resource will become available determined based on a call duration value associated with a second process. Accordingly, Hoffpauir 2, either alone or in combination with Chorn, Abe et al., and Simor, do not disclose, teach, or suggest a resource manager being responsive to identification of a thread for the first process requesting allocation of the resource, when the resource is already allocated to a thread for the second process, to establish a joining function to the thread for the second process and to provide an indication to the first process of an expected time before the resource will become available determined based on a call duration value associated with the second process.

For at least the foregoing reasons, Applicant submits that the rejection of claim 12 is unsupported by Chorn in view of Abe et al., in further view of Simor, and in further view of Hoffpauir 2. Applicant also submits that the teachings of Jones et al. are insufficient to remedy the aforementioned deficiencies of Chorn, Abe et al., Simor, and Hoffpauir 2. Accordingly, the combination of Chorn, Abe et al., Simor, Hoffpauir 2, and Jones et al. does not teach or suggest claim 12.

Moreover, Applicant points out that the rejection of claims 8-9, 12-15, and 19-21 omits any reference to Edstrom et al. In the rejection of claims 1, 10-11, and 17, the Examiner admitted that Chorn fails to teach "that a process could have an expected call duration time value," and relied on Edstrom et al. to teach that feature. Because the rejection of claims 8-9, 12-15, 19-21 does not use Edstrom et al. as part of a basis for

rejection, and because the features of claim 12 are similar to those of claims 1, 10-11, and 17, the rejection of claim 12 is defective on its face. Any attempt to finalize the rejection of claim 12 using Edstrom et al. would be improper.

The dependent claims 2-9, 13-16, and 18-21 are allowable not only for the reasons stated above with regard to their respective allowable base claims, but also for their own patentable features that distinguish them from any combination of Chorn, Abe et al., Simor, Edstrom et al., Hoffpaur 1, Hoffpaur 2, and Jones et al.

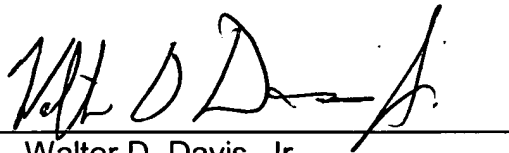
Since each of the claims is allowable, Applicant respectfully requests the timely allowance of this application.

If an extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this Amendment, such extension is requested. If there are any other fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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By: 
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